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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,813	01/22/2004	Mario Rabinowitz		6114

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EXAMINER

TRA, TUYEN Q

ART UNIT	PAPER NUMBER
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2873

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/762,813

Applicant(s)

RABINOWITZ, MARIO

Examiner

Tuyen Q Tra

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,7-10,12,14-17,19 and 21 is/are rejected.
- 7) ☒ Claim(s) 4,6,11,13,18 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0204.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

Page 13, lines 2, "becausethe" should be --because the--.

Page 14, "soley" should be --solely--. Appropriate correction is required.

Claims 4, 5, 6, 11, 12, 13, 18, 19 and 20 recites "electodes", which should be changed to --electrodes--. Or appropriate correction is needed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 9 and 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 2, 9 and 16 recite "wherein an electret is placed adjacent to each micro-mirror so that its permanent electric dipole is parallel to the induced electric dipole" which is not found in the specification. Instead, the disclosure state that the total dipole movement parallel to applied electric field E. Appropriate correction is needed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Art Unit: 2873

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1 are rejected under 35 U.S.C. 102(e) as being anticipated by Rabinowitz et al. (U.S. Pat. 6,738,176B2).

a) With respect to claims 1 and 8, Rabinowitz et al. discloses a dynamic multi-wavelength switching ensemble and method thereof in Figures 1 and 5 comprising of an array of rotatable micro-mirrors (item 2, fig. 5); means (i.e. voltage source) for producing an induced electric dipole in the rotatable micro-mirrors (2); opposingly faced pairs of electrodes (items 14, 15) in a grid array for coupling to the induced electric dipole; means (i.e. computer/micro-processor) for selectively addressing a pair of the electrodes; and means (power supply) for establishing independent voltages at the corners of the electrodes (col. 4, lines 45-67; col. 6, lines 15-64).

b) With respect to claim 15, Rabinowitz et al. discloses a dynamic multi-wavelength switching ensemble in Figures 1 and 5 comprising of an array of rotatable micro-mirrors (item 2, fig. 5); means (i.e. voltage source) for producing an induced electric dipole in the rotatable micro-mirrors (2); opposingly faced pairs of electrodes (items 14, 15) in a grid array for coupling to the induced electric dipole; means (i.e. computer/micro-processor) for selectively addressing a pair of the electrodes (14, 15); and means (i.e. power supply) for establishing independent voltages at the corners of the electrodes (col. 4, lines 45-67; col. 6, lines 15-64).

Art Unit: 2873

- c) With respect to claims 2, 9 and 16, Rabinowitz et al. further discloses wherein an electret is placed adjacent to each micro-mirror so that its permanent electric dipole is parallel to the induced electric dipole (col. 5, lines 46-48).
- d) With respect to claims 3, 10 and 17, Rabinowitz et al. further discloses wherein an electret is sandwiched between pairs of micro-mirrors (2).
- e) With respect to claims 7, 14 and 21, Rabinowitz et al. discloses the means for producing the induced electric dipole is an intermittent voltage source.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5, 12 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rabinowitz et al. (U.S. Pat. 6,738,176B2).

Rabinowitz et al. discloses a dynamic multi-wavelength switching ensemble and method thereof in Figures 1 and 5 comprising of an array of rotatable micro-mirrors (item 2, fig. 5); means (i.e. voltage source) for producing an induced electric dipole in the rotatable micro-mirrors (2); opposingly faced pairs of electrodes (items 14, 15) in a grid array for coupling to the induced electric dipole; means (i.e. computer/micro-processor) for selectively addressing a pair of the electrodes; and means (power supply) for establishing independent voltages at the corners of the electrodes. However, Rabinowitz et al. does not disclose the shape of top and bottom electrodes are rectangular.

Although the Rabinowitz et al. device does not teach the exact shape of the electrodes as being rectangular as that claimed by Applicant, the shape or size differences are considered obvious design and are not patentable unless unobvious or unexpected results are obtained from these changes. Additionally, the Applicant has presented no discussion in the specification which convinces the Examiner that the particular rectangular shape of the electrode is anything more than one of numerous shapes a person of ordinary skill in the art would find obvious for the purpose of ensuring optimum performance. It appears that these changes produce no functional differences and therefore would have been obvious.

Allowable Subject Matter

7. Claims 4, 6, 11, 13, 18 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The reason for the indication of allowable subject matter is that (claim 4) wherein the pair of electrodes are fragmented wires forming the edges of the top and bottom faces of a rectangular parallelepiped; (claim 6) wherein one electrode forms the partitioned rectangular side of one face of a rectangular parallelepiped that is opposite a fragmented wire electrode forming the side edges of the opposite face disclosed in the claims is not found in the prior art.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2873

Reboa et al. (US Pub. 20030202265 A1) discloses a micro-mirror device including dielectrophoretic liquid in Figure 5 comprising of mirror (47), an electrode (60) and an opposed electrode (62) wherein the amount of movement of mirrors (47) including liquids having a higher dipole moment needing less activation energy for mirror (47) movement.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen Tra whose telephone number is (571) 272-2343. The examiner can normally be reached on Monday to Thursday from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps, can be reached on (571) 272 - 2328. The fax number for this Group is (703) 872-9306.

tt

November 24, 2004


Georgia Epps
Supervisory Patent Examiner
Technology Center 2800